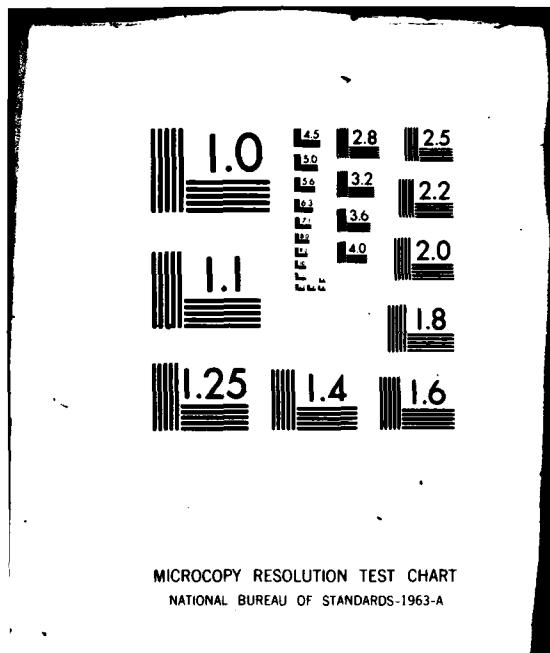


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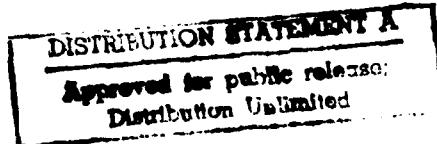
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INTRODUCTION

Enduring geopolitical realities have given special weight to maritime affairs in the history of security planning for the Iberian Peninsula. Maritime factors remain important today, and I know of no analyst of military affairs who foresees their diminished importance in the future. This paper will review the threats to Iberian security that would arise directly or indirectly from maritime axes in the context of a major war between East and West today and in the near future. This context is selected, not because it is the most probable, but because it provides the most severe and comprehensive threats against which to assess military requirements and, more important, because it is exactly the eventuality whose occurrence state security policy should be designed to prevent. Time and space do not permit attention to conflicts of lower intensity nor indeed to the "peacetime" threats to the Iberian region that arise from the politico-military actions of other states, and this is regrettable because the latter, especially, are much more likely to occur and are in the aggregate, in the author's opinion, equally threatening to the world balance of power.

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In the discussion of the maritime aspects of a war between the great coalitions which follows, we will, first, assess Soviet goals in general war and the concept of operations the Soviets will employ to achieve those goals, and second, the role assigned Soviet maritime power -- primarily the Soviet Navy. In the process, I shall be outlining a "scenario," to use the common U.S. term, but I wish to emphasize that I provide this "generic" European scenario mainly as a concrete framework to help discuss and evaluate the ideas that follow. If one selects a somewhat different scenario, the implications that relate to Iberian security we shall be discussing in the third and concluding part of the paper may be modified accordingly but should not be invalidated.

Soviet War Goals and Concept of Operations

The goals of the USSR in a war in Europe, no matter how it arises, are, in order of priority, (1) to minimize damage to the military-economic potential of the USSR; (2) to maintain dominance over the "Socialist Commonwealth"; (3) to defeat NATO armed forces in Europe; and (4) to seize and occupy the territory of its European adversaries. According to Soviet views, in such a war, the central region will be the decisive

axis and ground forces will be the decisive means. All other forces and means -- including naval and intercontinental forces -- and all other theaters and axes will remain subordinate to ground action on the central front. An intercontinental exchange may or may not take place; if it does, the Soviets may hope to eliminate the United States as a European power.

Soviet forces outside Europe (e.g., along the Chinese frontier), almost certainly will come to a high state of readiness, they may attack preemptively if threatened, but given Soviet conservatism and geographic priorities, they would not, in my opinion, initiate combat against non-European states until the course of the struggle in the central region of Europe began to take shape. An exception to the above would be NATO ships at sea or the military forces of NATO nations located ashore outside NATO territory, if they could be destroyed at reasonable costs to the Soviets.

One cannot of course specify with confidence the geographic extent of the "enemy" in Soviet plans today. Whether French military forces on French territory are targeted for Soviet initial attacks is difficult to say; much would depend on French policy and the cir-

cumstances under which the war arose. The same, of course, is true for Spanish military forces. However, there seems to be absolutely no reason to doubt that today, when Soviet military planners calculate the "correlation of military forces" between themselves and their opponents, neither France nor Spain is reckoned on the "friendly" side of their balance sheets.

There seems to be near universal agreement that Soviet ground forces would attempt to achieve an early breakthrough and the most rapid advance westward possible, perhaps presenting NATO decision-makers with a fait accompli before a decision could be taken to employ NATO nuclear weapons in the field. Soviet actions on NATO's northern and southern flanks would, at a minimum, be on a scale necessary to ensure that those regions could not be used as points d'appui for NATO counterattacks; successful seizure of the Danish and Turkish Straits could lead to the exit of that part of the Soviet Baltic and Black Sea Fleets not already deployed forward. Throughout this campaign, Soviet strategic nuclear weapons would seek to deter the use of NATO strategic weapons, both Euro-strategic and intercontinental, while a rapid victory is achieved on the ground.

The Role of Maritime Forces

What is the role of maritime forces, if the war develops as I have outlined it so far -- that is, if it follows the path the Soviet planners probably prefer? Almost certainly, in the Soviet view, naval forces are seen as peripheral. A part of the Soviet Navy, already deployed forward, would be augmented in the period of tension. Its tasks in the war's opening hours and days will be to destroy any enemy strategic systems that can be attacked at sea and in port, to strike enemy naval forces, ashore and at sea, enemy surveillance systems, and enemy military sealift; and to carry out offensive mining. Its main objective is to attrite, harass and tie down Western seapower so that it cannot be brought to bear on targets nearer the USSR. But the majority of the Soviet Navy -- including, during the war's conventional phase, perhaps much of land-based Soviet Naval Aviation (SNA) -- will probably operate nearer the USSR. Its tasks are to provide a defense in depth for the SSBNs of the Northern (and Pacific) Fleets and for the USSR proper and to support the land campaign through seizure of straits and islands, destruction of enemy ports and naval facilities, delivery of logistic and fire sup-

port to ground forces, and countering enemy amphibious and tactical air strike operations.

The Mediterranean Sea presents a special problem for Soviet planners. Prudence requires that they regard the Strait of Gibraltar as an extremely hazardous passage even for their submarines, if not in the war's initial period, at least, to be closed to their forces. The Turkish Straits similarly will be closed, as long as Turkish forces hold even one side of the Bosphorus or Dardanelles and perhaps longer, if a NATO mining campaign in the Dardanelles and its approaches were to be mounted and sustained. Therefore, the Soviets must be prepared to fight the naval campaign in the Mediterranean with the naval forces initially present in the Mediterranean for at least the amount of time they expect their forces will require to seize and clear the Turkish Straits. These forces would be supported of course by SNA and LRA based initially in the Crimea and later perhaps staged from bases farther to the west. These factors imply the Soviets will adopt a rather conservative employment strategy in the Mediterranean, designed to husband resources and, initially at least, to prevent the seaborne reinforcement, resupply, and tactical air support of Greek and

Turkish ground forces from the West. Soviet actions in the Western Mediterranean might take the form of screening, reconnaissance and harassment by submarine forces and, of course, such land-based aviation as can be spared from other tasks. All of this assumes that the USSR does not develop sufficiently close political relationships with one or more states on the southern littoral of the Mediterranean to allow them to plan to base or stage aircraft from airfields in such countries. We must presume that the Soviets plan to move the locus of their operations in the Mediterranean steadily westward to secure the southern flank of their advancing ground forces.

Soviet Priorities and the Role of Western Sea Lanes of Communication

But what if the war does not develop along these lines? What if the war becomes prolonged at the conventional level? (May we postpone for a moment the complications arising from the introduction of nuclear weapons.) Soviet planners have undoubtedly considered this possibility as well, and I believe it has played an important role thus far in their calculations of the overall correlation of military forces: In particular, seapower will have increasing effect on the

course and outcome of hostilities. Moreover, the United Kingdom and Iberian Peninsula potentially represent operational depth for the Western powers which, in combination with the massive resupply of material and men across the Atlantic from North America, could make the longevity of a Soviet "victory" on the ground over NATO in Europe highly tenuous.

Given the focus of this paper, let me concentrate on the seaborne resupply aspect (although it is conceivable that both the United Kingdom and the Iberian Peninsula could also be the source of amphibious and counter-amphibious operations). Earlier, I imputed to Soviet planners a relatively low priority in the war's initial period to a massive campaign against the sea lines of communication (SLOC) in the North Atlantic. However, that estimated priority reflects four important factors in the Soviet view: first, their expectation that the duration of combat on the ground will be brief enough that resupply from North America will be irrelevant to the campaign's outcome; second, their expectation that Western European coastal waters, including those of the Iberian Peninsula, may be vulnerable to mining and submarine operations and that Western European ports are vulnerable to attacks with con-

ventional weapons; third, their respect for Western high seas SLOC defense capabilities, achieved as the result of decades of heavy investment in ASW and AAW as well as operational developments in those fields; and fourth, and, in my opinion, most important, other tasks assigned to the Soviet Navy which arise later in the course of hostilities.

Let us take up this last factor first because it is, as I've suggested, the overriding concern of Soviet naval planners today. Soviet doctrinal writings since the late 1960s have given evidence of Soviet concern with the security of their ballistic missile submarines. Since roughly 1971, that concern has focused on Soviet SSBNs in the role of a force withheld from initial strikes to serve as a strategic reserve with military and political utility. This is not a secondary but a primary task for the Soviet Navy; the existence of an SSBN force in being is designed to prevent the subjugation of the Soviet state, if the war should go badly for the Soviets, but more likely in the Soviet view, it is to underwrite or guarantee the Soviet hold on territory captured by Soviet ground forces and to help the USSR dominate the "postwar" world -- van-

guished enemies, non-belligerents and erstwhile allies.

The importance of the SSBN strategic reserve cannot be overstated. The Soviets have consistently coupled the idea of a withheld strategic SSBN force with general-purpose naval forces which are also withheld from combat in the forward area to provide command of the sea on behalf of the SSBN strategic reserve, the requirement for which is most acute in the war's closing days. Indeed, it is for this mission -- command of the sea on behalf of the Soviet strategic reserve -- that the Kiev-class aircraft carrier and her reported nuclear-powered successor class, as well, no doubt, as the new destroyer and cruiser classes, have been constructed. Air power is, in the Soviets view, the key to command of the sea, and in the nuclear phase of the war, which the Soviets fully expect and plan for, air power will reliably come only from aircraft carriers. After all, prudent planners cannot rely on the availability of very much of land-based aviation which is unlikely to survive the nuclear counterforce strikes that will, in the Soviet view, mark the beginning of the war's nuclear phases.

This assessment of Soviet priorities leads to the conclusion that today, the Soviet Navy is assigned tasks of paramount importance to the Soviet state. For the first time in its history, the USSR has a stake in the positive use of the seas, and is in the process of acquiring general-purpose naval forces whose missions for the first time go beyond the denial of the use of the sea by others -- which historically has been the goal of Soviet seapower.

A Soviet Campaign Against Western Sea Lines of Communication

With this idea of Soviet naval priorities in mind, let us now consider the factors affecting Soviet planning regarding a campaign against NATO sea lines of communication in the Atlantic, giving special attention, where relevant, to the Iberian Peninsula and associated islands. If the war becomes prolonged -- that is, if the Soviet blitzkrieg is halted somewhere in NATO territory for military, political, or perhaps a combination of both reasons, resupply of Western forces from North America will become a major factor in the war's course and outcome -- indeed, a factor very likely to become more important than relative

technological quality or operational finesse on the battlefield.

As I suggested earlier, to interrupt Western resupply efforts, Soviet forces are very likely to intensify planned mining and submarine operations in the waters of northern Europe and, to the degree they are capable, in the waters of the Bay of Biscay southward to the Straits of Gibraltar and in the western Mediterranean. Whether the Backfire force will be committed in numbers during the conventional phase of such a campaign is difficult to say. If it is, its initial targets are likely to be Western ocean surveillance facilities, airfields, and port facilities, especially those equipped to handle container ships, and, of course, Western naval forces assigned to convoy defense.

It has long been recognized that more southerly routes for transatlantic convoys would reduce the threat from Soviet land-based aviation they might face (again, assuming that no Soviet bases are available in North or West Africa), as well as giving Western ASW forces greater opportunity to be brought to bear on the Soviet submarine threat. Such routing, should it be

adopted, will of course further increase the importance of the Canary Islands. It goes without saying that the Azores and Madeira are as crucial to the struggle in the Atlantic as Gibraltar and the Balearics are to the control of the western Mediterranean. The Iberian Peninsula itself could serve as the terminus of transatlantic convoys or provide the basis for air and anti-submarine defense of such convoys en route to more northerly and easterly destinations.

Finally, let us take note of the well-known reality that the timing and scale of introduction of nuclear weapons in the war, should they be employed, will have a profound effect on the nature and duration of hostilities. However, the mobility of naval forces makes them less vulnerable to nuclear weapons than other kinds of armed forces, and the common conception that nuclear weapons entirely vitiate naval forces seems misplaced. On the contrary, as the ballistic missile submarine building programs of the maritime powers seem to confirm, naval forces seem to have a special place in nuclear war -- or, to be more precise, in deterring war and in controlling escalation to nuclear levels, should war occur.

We have now reviewed the major maritime aspects of a war between East and West, should it occur. We have seen that the Iberian Peninsula retains a vital geo-strategic potential in such a war, particularly in its maritime dimensions. My own opinion is that strong maritime and air defense capabilities on the part of the Iberian states can play an important role in deterring the perilous eventualities discussed above and thus contribute to the security and well-being of the Western nations at large.

FACTORES MARÍTIMOS QUE AFECTAN LA SEGURIDAD IBÉRICA

FACTORES MARÍTIMOS QUE AFECTAN LA SEGURIDAD IBÉRICA

Introducción

En lo que atañe a la seguridad ibérica, la realidad geopolítica peninsular y europea ha dado una importancia especial a los asuntos marítimos a través de la historia. Los factores marítimos permanecen importantes hoy en día, y no conozco de ningún investigador de cuestiones militares que prevea que sean de menos importancia en los años venideros.

En la presente charla voy a tratar de las amenazas a la seguridad ibérica que surgirían, actualmente y en el futuro próximo, desde los ejes marítimos en caso de guerra general entre Oriente y Occidente. Para comenzar hablare de los fines soviéticos en una guerra general y del concepto de operaciones que ellos emplearán para lograr estos fines; luego hablare sobre el papel que desempeñará la marina de guerra soviética en aquel conflicto. En cuanto proceda con esto, reseñare un "escenario" genérico europeo que nos servirá de esqueleto o armazón para examinar y evaluar las ideas que voy a presentar.

Fines de guerra soviéticos y concepto de operaciones para lograrlos

Los fines de la Unión Soviética en una guerra europea -- como quiera que ésta comience -- son los siguientes (en orden de pri-

oridad): primero, reducir al mínimo cualquier daño a su potencia militar y económica; segundo, mantener su soberanía sobre la "comunidad socialista"; tercero, derrotar a las fuerzas militares de la OTAN en el continente europeo; y cuarto, conquistar y ocupar el territorio de sus adversarios europeos. Al pensar soviético, el frente decisivo en aquella guerra será la región central de Europa, y las fuerzas principales las terrestres. En cuanto a otras fuerzas militares -- navales e intercontinentales inclusive -- u otros teatros de acción militar, éstos serán de menor importancia. Un intercambio intercontinental nuclear es posible, mas no inevitable; en caso de que éste ocurra, es probable que los soviéticos esperen, por lo menos, eliminar a los Estados Unidos como potencia europea.

A mi juicio, los soviéticos no comenzarán sus esfuerzos militares dirigidos contra estados extraeuropeos hasta aclararse el desarrollo del combate en la región central del continente. Como excepciones debemos señalar a navíos de guerra u otras fuerzas militares de la OTAN si sucede que éstos se encuentren fuera de los estados miembros de la OTAN y se puedan eliminar sin mayores gastos soviéticos.

No se puede, desde luego, precisar con certeza la extensión geográfica del "enemigo" en los planes de guerra actuales de la Unión Soviética. No se puede decir, por ejemplo, si las fuerzas militares francesas situadas en territorio francés figuran en estos planes como objetivos de los primeros ataques soviéticos; mucho

dependería de la política francesa del momento y de las circunstancias en las cuales la guerra comienza. Lo mismo, por cierto, corresponde a las fuerzas militares españolas. Sin embargo, no cabe la menor duda de que ni Francia ni España aparecen como "países amigos" en el cálculo soviético de la "correlación de fuerzas militares" en el continente europeo.

Hay, al parecer, acuerdo casi universal de que las fuerzas terrestres soviéticas intentarán cuanto antes lograr una brecha en la línea de combate y avanzar hacia el oeste con cuanta rapidez sea posible, a fin de crear un hecho consumado antes que la OTAN pueda llegar a una determinación acerca del empleo de armas nucleares en el campo de batalla. Las maniobras soviéticas hacia el flanco septentrional y meridional del continente alcanzarán, por lo menos, la escala necesaria para asegurar que estas regiones no se empleen como puntos de partida para contraataques Occidentales. A través de la campaña los soviéticos procurarán asegurar mediante la "balanza del terror" que las armas nucleares estratégicas de la OTAN no se empleen en contra suya.

El rol de las fuerzas navales

¿Que papel desempeñarán las fuerzas marítimas en aquella guerra? Es casi seguro que al parecer soviético las fuerzas navales serán de significado periférico. Aquella parte de la marina de guerra soviética que está ya desplegada en el océano será aumentada du-

rante el periodo de tensión anterior al comienzo de las hostilidades. Durante las primeras horas y los primeros días de la guerra sus tareas serán las de destruir a cuantos sistemas estratégicos enemigos se encuentren a mano, sembrar campos de minas para estropear la movilidad enemiga, acometer a las fuerzas navales del enemigo, y atacar sus sistemas de reconocimiento y medios de transporte militar marítimo. El propósito principal de tal esfuerzo es el de desgastar, hostigar e inmovilizar al poder marítimo del Occidente de manera que éste no se pueda emplear contra objetivos próximos a la Unión Soviética. Pero es probable que la mayor parte de las fuerzas navales soviéticas estará maniobrando en aguas mas cercanas a la patria.

Las misiones de éstas incluyen: proporcionar defensa en profundidad para los SSBN¹ de la Flota del Norte (y del Pacífico) tanto como para la propia Unión Soviética; apoyar la campaña terrestre; tomado estrechos e islas estratégicas; destruir puertos y bases navales del enemigo;² proporcionar apoyo logístico y de fuego a las fuerzas terrestres; y defender contra operaciones anfíbias y de aviación táctica del enemigo.

¹Es decir, submarinos de proyectiles balísticos nucleares.

²Empleando proyectiles lanzados desde SSBN y desde aviones pertenecientes a la aviación naval.

El mar Mediterráneo ofrece un problema único para los estrategas soviéticos. La discreción exige que el estrecho de Gibraltar se considere como paso arriesgadísimo durante el período inicial de la guerra, aún para submarinos. Los estrechos Turcos serán igualmente peligrosos desde el punto de vista soviético, siempre que las fuerzas turcas ocupen siquiera un banco del Bósforo o de los Dardanelos. Deben por ende los soviéticos estar preparados para emprender la campaña naval en el Mediterráneo empleando las fuerzas navales ya desplegadas en este lugar (desde luego con el apoyo de la Aviación Naval y de Largo Alcance de las Fuerzas Aéreas soviéticas). Estos factores señalan una estrategia soviética algo conservadora, cuyos propósitos son de guardar recursos e impedir el abastecimiento por la mar y el apoyo táctico aéreo para las fuerzas terrestres griegas y turcas de parte de la OTAN. Las actividades soviéticas en el Mediterráneo occidental podrían tomar la forma de operaciones de cobertura, reconocimiento y hostigamiento ejecutadas por submarinos y por cuantos aviones no estén comprometidos a otras tareas de mayor prioridad. Todo esto da por supuesto que la Unión Soviética no logre desarrollar sus vínculos con los países del litoral austral mediterráneo hasta tal punto que se le otorgue el derecho de valerse de los aeródromos de éstos. Debemos además suponer que los soviéticos proyectan trasladar el foco de sus operaciones mediterráneas paulatinamente hacia el oeste al avanzar sus fuerzas terrestres, a fin de resguardarles el flanco meridional.

Prioridades soviéticas e importancia de las rutas marítimas occidentales

Mas ¿Que ocurriría si la guerra no se desenvuelve de esta manera? ¿Que ocurriría si la guerra se vuelve prolongada al nivel convencional? (Dejemos de lado por el momento las complicaciones que resultarían por la introducción de armas nucleares.) No cabe duda de que los estrategas soviéticos tambien han considerado esta eventualidad, y en mi opinión, es una que hasta ahora ha ocupado un importante lugar en el cálculo soviético de la correlación europea de fuerzas militares. El poderío naval en particular tendrá un efecto creciente sobre el transcurso y desenlace de las hostilidades a medida que la guerra se alargue. Por otra parte, el Reino Unido y la Península Iberica ambos constituyen una retaguardia en potencia que -- en combinación con los abastecimientos necesarios desde Norteamérica -- podría volver efímero cualquier "triunfo" soviético en la región central.

Dado el tema de esta charla, voy a prestar atención ahora al abastecimiento transoceánico de las fuerzas de la OTAN. Anteriormente afirmé que para los soviéticos una campaña en gran escala dirigida contra las comunicaciones marítimas del Atlántico Norte durante el período inicial de la guerra no es de mayor prioridad. Vale decir, sin embargo, que aquel juicio resulta de cuatro importantes consideraciones: primera, la expectativa soviética de que el com-

bate en tierra será de corta duración; segunda, la expectativa de parte de Moscú de que se puedan sembrar minas y maniobrar submarinos en las aguas costeras de la Europa Occidental (incluyendo las de la Península Ibérica) y de que los puertos de aquella región se puedan atacar con armas convencionales; tercera, el respeto que tienen los soviéticos por la capacidad de la Alianza de defender sus líneas de comunicación marítima; y cuarta -- y a mi parecer la consideración mas importante -- las otras tareas que la marina de guerra soviética debe ejecutar mas tarde en el conflicto.

Tratemos sobre esta última en primer lugar, ya que es la que más preocupa a los estrategas soviéticos hoy en día. Desde el año 1971 aproximadamente, una parte de la fuerza soviética de SSBN ha estado encargada de servir de reserva estratégica. Esta no es tarea secundaria de la marina soviética, sino principal. El propósito de dicha reserva es el de asegurar la posesión de los territorios ya conquistados por las fuerzas terrestres soviéticas, tanto como de garantizar el dominio de la URSS sobre el mundo de postguerra. En el caso contrario -- es decir, si la guerra va mal desde el punto de vista soviético -- aquella reserva serviría para desanimar intentos Occidentales de subyugar al estado soviético.

La importancia de la reserva estratégica apenas se puede exagerar. Fuerzas navales de uso general están señaladas para asegurar el dominio del mar en torno a la reserva, así proporcionándole protección. Más aún, los portaaviones de la clase "Kiev," tanto como la clase sucesora de propulsión nuclear, funcionarán en esta misma calidad; puesto que a juicio soviético el poderío aéreo es la clave del dominio del mar, y en la fase nuclear de la guerra no se podrá confiar sino en el poderío aéreo que proporcionarían los portaaviones.

Esta evaluación de las prioridades soviéticas nos permite concluir que la marina de guerra de la Unión Soviética está encargada de tareas de capital importancia para el estado soviético. Por primera vez en su historia, la Unión Soviética tiene un interés en el uso positivo del océano, y está adquiriendo fuerzas navales de propósito general cuyas tareas van más allá de la de negarles a otros el uso de la mar.

Una campaña soviética dirigida contra las rutas marítimas del Occidente

Teniendo en cuenta esta idea de las prioridades navales soviéticas, examinemos ahora los componentes del plan de ataque soviético en lo que se refiere a las rutas marítimas de la OTAN, prestando atención particular a la Península Ibérica e islas asociadas. Si sucede que la guerra se alarga (es decir, si el Blitzkrieg sovie-

tico se detiene antes de lograr sus fines en el continente europeo) el abastecimiento de las fuerzas Occidentales desde Norteamérica llegara a ser un factor importantisimo en cuanto al transcurso y desenlace de la guerra.

Como indique anteriormente, es muy probable que los sovieticos intentarán -- a fin de estropear el abastecimiento de la OTAN -- sembrar campos de minas e intensificar sus operaciones de submarinos en las aguas de la Europa del Norte y, en cuanto les sea posible, en el mar Cantábrico, el estrecho de Gibraltar, y el Mediterráneo occidental. Es difícil juzgar si se comprometerían aviones "Backfire" en grandes numeros durante la fase convencional de tal campaña. Pero si esto ocurre, es probable que los primeros objetivos suyos serían las bases navales y los puertos mercantes del Occidente -- en particular, aquellos que son capaces de recibir a contenedores -- y, desde luego, las fuerzas navales encargadas de escoltar los convoyes con destino a Europa.

El empleo de rutas meridionales para los convoyes transatlánticos haría disminuir la amenaza proveniente de aviones soviéticos basados en tierra. Si tales rutas se emplean, la importancia de las islas Canarias desde luego aumentaría aún más. Huelga decir que las islas Azores y Madeira son tan críticas para la lucha en el Atlántico como lo son las islas Baleares y el estrecho de Gibraltar para el dominio del Mediterráneo occidental. La misma Pení-

sula Iberica podría servir de término para los convoyes transatlánticos o bien de base para la defensa antiaérea y antisubmarina de ellos.

Para concluir, tomemos nota de la realidad consabida de que tanto la hora de introducción como la escala de empleo de las armas nucleares en una guerra general ambas tendrán un efecto profundo sobre el carácter y la duración de las hostilidades. Sin embargo, en virtud de su movilidad las fuerzas navales son menos vulnerables que cualesquiera otras contra las armas nucleares; por lo tanto, la idea, muy corriente hoy en día, de que dichas armas hayan puesto en duda la utilidad de las fuerzas navales tiene poco fundamento.

En resumen, diría yo que la Península Iberica tiene la potencialidad (cuanto más en sus aspectos marítimos) de ser un factor geoestratégico importantísimo en cualquiera guerra que haya entre Oriente y Occidente. En mi opinión, una poderosa defensa antiaérea y marítima de parte de los estados ibéricos contribuiría en alto grado al alejamiento de las azarosas posibilidades descritas aquí, y por ende a la seguridad y al bienestar de todas las naciones del Occidente.

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PP 141
Marsch, Maurice M., "Generalized Hermite Polynomials," 8 pp., Feb 1976 (Reprinted from the Journal of Computational and Applied Mathematics, Vol. 1, No. 4 (1978), 273-277).
*Research supported by the National Science Foundation

PP 143
Horowitz, Stanley and Sherman, Allen (LCDR, USN), "Maintenance Personnel Effectiveness in the Navy," 33 pp., Jan 1976 (Presented at the RAND Conference on Defense Manpower, Feb 1976) AD A021 581

PP 144
Durch, William J., "The Navy of the Republic of China - History, Problems, and Prospects," 68 pp., Aug 1976 (Published in "A Guide to Asiatic Fleets," ed. by Barry M. Blechman and Robert Berman, Naval Institute Press) AD A030 480

PP 145
Kelly, Anne M., "Port Visits and the "Internationalist Mission" of the Soviet Navy," 38 pp., Apr 1976, AD A023 438

PP 147
Koester, J. Christian, "Legal Issues in Protecting Offshore Structures," 33 pp., Jun 1976 (Prepared under task order N00014-68-A-0091-0023 for ONR) AD A028 390

PP 149
Squires, Michael L., "Counterforce Effectiveness: A Comparison of the Triple "K" Measure and a Computer Simulation," 24 pp., Mar 1976 (Presented at the International Study Association Meetings, 27 Feb 1976) AD A022 591

PP 150
Kelly, Anne M. and Petersen, Charles, "Recent Changes in Soviet Naval Policy: Prospects for Arms Limitations in the Mediterranean and Indian Oceans," 28 pp., Apr 1976, AD A 023 723

PP 151
Horowitz, Stanley A., "The Economic Consequences of Political Philosophy," 8 pp., Apr 1976 (Reprinted from Economic Inquiry, Vol. XIV, No. 1, Mar 1976)

PP 152
Marsch, Maurice M., "On Path Integral Solutions of the Schrödinger Equation, Without Limiting Procedure," 10 pp., Apr 1976 (Reprinted from Journal of Mathematical Physics, Vol. 17, No. 4 (Apr 1976), 566-576).
*Research supported by the National Science Foundation

PP 153
Marsch, Maurice M., "WKB Expansions by Path Integrals, With Applications to the Anharmonic Oscillator," 137 pp., May 1976, AD A028 440
*Research supported by the National Science Foundation

PP 154
Marsch, Maurice M., "On the Semi-Classical Expansion in Quantum Mechanics for Arbitrary Hamiltonians," 19 pp., May 1976 (Published in Journal of Mathematical Physics, Vol. 18, No. 4, pp. 758-766, Apr 1977), AD A028 441

PP 155
Squires, Michael L., "Soviet Foreign Policy and Third World Nations," 26 pp., Jun 1976 (Prepared for presentation at the Midwest Political Science Association meeting, Apr 30, 1976) AD A028 388

PP 156
Stalling, William, "Approaches to Chinese Character Recognition," 12 pp., Jun 1976 (Reprinted from Pattern Recognition (Pergamon Press), Vol. 8, pp. 87-98, 1976) AD A028 692

PP 157
Morgan, William F., "Unemployment and the Pentagon Budget: Is There Anything in the Empty Pork Barrel?" 20 pp., Aug 1976 AD A030 486

PP 158
Heckell, LCDR, Richard D. (USN), "Experimental Validation of Probability Predictions," 25 pp., Aug 1976 (Presented at the Military Operations Research Society Meeting, Fall 1976) AD A030 458

PP 159
McConnell, James M., "The Gorshkov Articles, The New Gorshkov Book and Their Relation to Policy," 93 pp., Jul 1976 (Published in Soviet Naval Influences: Domestic and Foreign Dimensions, ed. by M. MacGwire and J. McDonnell; New York: Praeger, 1977) AD A029 227

PP 160
Wilson, Diamond P., Jr., "The U.S. Sixth Fleet and the Conventional Defense of Europe," 50 pp., Sep 1976, AD A030 457

PP 161
Metlich, Michael E. and Peet, Vice Adm. Ray (USN, Retired), "Fleet Commanders: Afloat or Ashore?" 9 pp., Aug 1976 (Reprinted from U.S. Naval Institute Proceedings, Jun 1976) AD A030 468

PP 162
Friedheim, Robert L., "Parliamentary Diplomacy," 106 pp., Sep 1976 AD A033 306

PP 163
Lockman, Robert F., "A Model for Predicting Recruit Losses," 9 pp., Sep 1976 (Presented at the 84th annual convention of the American Psychological Association, Washington, D.C., 4 Sep 1976) (Published in Defense Manpower Policy (Richard V. L. Cooper, ed.), The Rand Corporation, 1978), AD A030 469

PP 164
Mahoney, Robert B., Jr., "An Assessment of Public and Elite Perceptions in France, The United Kingdom, and the Federal Republic of Germany," 31 pp., Feb 1977 (Presented at Conference "Perception of the U.S. - Soviet Balance and the Political Uses of Military Power" sponsored by Director, Advanced Research Projects Agency, April 1976) AD A030 460

PP 165
Jendrow, James M., "Effects of Trade Restrictions on Imports of Steel," 67 pp., November 1976, (Delivered at ILAB Conference in Dec 1976)

PP 166 - Revised
Feldman, Paul, "Why It's Difficult to Change Regulation," Oct 1976, AD A037 682

PP 167
Kleinman, Samuel, "ROTC Service Commitments: a Comment," 4 pp., Nov 1976, (Published in Public Choices, Vol. XXIV, Fall 1976) AD A033 306

PP 168
Lockman, Robert F., "Revalidation of CNA Support Personnel Selection Measures," 38 pp., Nov 1976

PP 169
Jacobsen, Louis S., "Earnings Losses of Workers Displaced from Manufacturing Industries," 38 pp., Nov 1976, (Delivered at ILAB Conference in Dec 1976), AD A030 809

PP 170
Brockling, Frank P., "A Time Series Analysis of Labor Turnover," Nov 1976, (Delivered at ILAB Conference in Dec 1976)

PP 171
Jordan, A. S.* and Ralston, J. M., "A Diffusion Model for GaP Red LED Degradation," 10 pp., Nov 1976, (Published in Journal of Applied Physics, Vol. 47, pp. 4518-4527, Oct 1976)
*Bell Laboratories

PP 172
Clossen, Kathleen P., "Unemployment Insurance and the Length of Unemployment," Dec 1976, (Presented at the University of Rochester Labor Workshop on 16 Nov 1976)

PP 173
Kleinman, Samuel D., "A Note on Racial Differences in the Added-Worker/Disengaged-Worker Controversy," 2 pp., Dec 1976, (Published in the American Economist, Vol. XX, No. 1, Spring 1976)

PP 174
Mahoney, Robert B., Jr., "A Comparison of the Brookings and International Incidents Projects," 12 pp., Feb 1977 AD A037 206

PP 175
Levine, Daniel; Stokoff, Peter and Spruill, Nancy, "Public Drug Treatment and Addict Crime," June 1976, (Published in Journal of Legal Studies, Vol. 5, No. 2)

PP 176
Felix, Wendell, "Correlates of Retention and Promotion for USNA Graduates," 38 pp., Mar 1977, AD A030 640

PP 177
Lockman, Robert F. and Warner, John T., "Predicting Attrition: A Test of Alternative Approaches," 32 pp., Mar 1977, (Presented at the OSD/ONI Conference on Enlisted Attrition, Xerox International Training Center, Leesburg, Virginia, 4-7 April 1977), AD A030 647

PP 178
Kleinman, Samuel D., "An Evaluation of Navy Unrestricted Line Officer Assessment Programs," 23 pp., April 1977, (Presented at the NATO Conference on Managerial Planning and Organization Design, Strom, Italy, 28 June 1977), AD A030 648

*CNA Professional Papers with an AD number may be obtained from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151. Other papers are available from the Management Information Office, Center for Naval Analyses, 2000 North Beauregard Street, Alexandria, Virginia 22311. An Index of Selected Publications is also available on request. The index includes a listing of Professional Papers; with abstracts; issued from 1969 to June 1980.

PP 179
Stoloff, Peter H. and Belut, Stephen J., "Vadore: A Model for Personnel Inventory Planning Under Changing Management Policy," 14 pp., April 1977, (Presented at the NATO Conference on Manpower Planning and Organization Design, Stresa, Italy, 20 June 1977), AD A038 048

PP 180
Horowitz, Stanley A. and Sherman, Allen, "The Characteristics of Naval Personnel and Personnel Performance," 16 pp., April 1977, (Presented at the NATO Conference on Manpower Planning and Organization Design, Stresa, Italy, 20 June 1977), AD A038 050

PP 181
Belut, Stephen J. and Stoloff, Peter, "An Inventory Planning Model for Navy Enlisted Personnel," 35 pp., May 1977 (Prepared for presentation at the Joint National Meeting of the Operations Research Society of America and The Institute for Management Science, 9 May 1977, San Francisco, California), AD A042 221

PP 182
Murray, Russell, 2nd, "The Quest for the Perfect Study or My First 1138 Days at CNA," 57 pp., April 1977

PP 183
Kassing, David, "Changes in Soviet Naval Forces," 33 pp., November, 1976, (Published as part of Chapter 3, "General Purpose Forces: Navy and Marine Corps," in Arms, Men, and Military Budgets, Francis P. Heber and William Schneider, Jr. (eds.), Crane, Russak & Company, Inc.: New York, 1977), AD A040 108

PP 184
Lodeman, Robert F., "An Overview of the OSD/ONR Conference on First Term Enlisted Attrition," 22 pp., June 1977, (Presented to the 38th MORS Working Group on Manpower and Personnel Planning, Annapolis, Md., 28-30 Jun 1977), AD A043 818

PP 185
Kassing, David, "New Technology and Naval Forces in the South Atlantic," 22 pp. (This paper was the basis for a presentation made at the Institute for Foreign Policy Analysis, Cambridge, Mass., 28 April 1977), AD A043 819

PP 186
Mirzai, Maurice M., "Phase Space Integrals, Without Limiting Procedure," 31 pp., May 1977, (Invited paper presented at the 1977 NATO Institute on Path Integrals and Their Application in Quantum Statistical, and Solid State Physics, Antwerp, Belgium, July 17-30, 1977) (Published in Journal of Mathematical Physics 19(11), pp. 298-307, Jan 1978), AD A040 107

PP 187
Colle, Russell C., "Nomography for Operations Research," 38 pp., April 1977 (Presented at the Joint National Meeting of the Operations Research Society of America and The Institute for Management Science, San Francisco, California, 9 May 1977), AD A043 820

PP 188
Dorsch, William J., "Information Processing and Outcome Forecasting for Multilateral Negotiations: Testing One Approach," 63 pp., May 1977 (Prepared for presentation to the 18th Annual Convention of the International Studies Association, Chase-Park Plaza Hotel, St. Louis, Missouri, March 18-20, 1977), AD A042 222

PP 189
Colle, Russell C., "Error Detection in Computerized Information Retrieval Data Bases," July, 1977, 13 pp. (Presented at the Sixth Cranfield International Conference on Mechanized Information Storage and Retrieval Systems, Cranfield Institute of Technology, Cranfield, Bedford, England, 26-29 July 1977), AD A043 820

PP 190
Mahoney, Robert B., Jr., "European Perceptions and East-West Competition," 96 pp., July 1977 (Prepared for presentation at the annual meeting of the International Studies Association, St. Louis, Mo., March, 1977), AD A043 861

PP 191
Sawyer, Ronald, "The Independent Field Assignment: One Man's View," August 1977, 25 pp.

PP 192
Holen, Arlene, "Effects of Unemployment Insurance Encitlement on Duration and Job Search Outcome," August 1977, 6 pp., (Reprinted from Industrial and Labor Relations Review, Vol., 30, No. 4, Jul 1977)

PP 193
Horowitz, Stanley A., "A Model of Unemployment Insurance and the Work Tax," August 1977, 7 pp. (Reprinted from Industrial and Labor Relations Review, Vol. 30, No. 40, Jul 1977)

PP 194
Classen, Kachleen P., "The Effects of Unemployment Insurance on the Duration of Unemployment and Subsequent Earnings," August 1977, 7 pp. (Reprinted from Industrial and Labor Relations Review, Vol. 30, No. 40, Jul 1977)

PP 195
Bresling, Frank, "Unemployment Insurance Taxes and Labor Turnover: Summary of Theoretical Finding," 12 pp. (Reprinted from Industrial and Labor Relations Review, Vol. 30, No. 40, Jul 1977)

PP 196
Raison, J. M. and Larimer, G. G., "Degradation of Bulk Electroluminescence Efficiency in Zn, O-Doped GaP LED's," July 1977, 3 pp. (Reprinted from IEEE Transactions on Electron Devices, Vol. ED-24, No. 7, July 1977)

PP 197
Wells, Anthony R., "The Case for Naval Aviation," 14 pp., Dec 1977, AD A040 107

PP 198
Classen, Kachleen P., "The Distributional Effects of Unemployment Insurance," 28 pp., Sept. 1977 (Presented at a Hoover Institution Conference on Income Distribution, Oct 7-8, 1977), AD A084 423

PP 199
Dorsch, William J., "Revolution From A F.A.R. - The Cuban Armed Forces in Africa and the Middle East," Sep 1977, 16 pp., AD A040 286

PP 200
Powers, Bruce F., "The United States Navy," 48 pp., Dec 1977 (Published as a chapter in The U.S. War Machine by Salamander Books, England, 1978), AD A040 108

PP 201
Dorsch, William J., "The Cuban Military in Africa and The Middle East: From Algeria to Angola," Sep 1977, 67 pp., AD A040 676

PP 202
Feldman, Paul, "Why Regulation Doesn't Work," (Reprinted from Technological Change and Welfare in the Regulated Industries, Brookings Reprint 219, 1971, and Review of Social Economy, Vol. XXIX, March, 1971, No. 1.) Sep 1977, 8 pp.

PP 203
Feldman, Paul, "Efficiency, Distribution, and the Role of Government in a Market Economy," (Reprinted from The Journal of Political Economy, Vol. 79, No. 3, May/June 1971.) Sep 1977, 19 pp., AD A045 675

PP 204
Wells, Anthony R., "The 1967 June War: Soviet Naval Diplomacy and The Sixth Fleet - A Re-appraisal," Oct 1977, 36 pp., AD A047 238

PP 205
Colle, Russell C., "A Bibliometric Examination of the Square Root Theory of Scientific Publication Productivity," (Presented at the annual meeting of the American Society for Information Science, Chicago, Illinois, 28 September 1977.) Oct 1977, 6 pp., AD A047 237

PP 206
McConnell, James M., "Strategy and Missions of the Soviet Navy in the Year 2000," 48 pp., Nov 1977 (Presented at a Conference on Problems of Sea Power as we Approach the 21st Century, sponsored by the American Enterprise Institute for Public Policy Research, 6 October 1977, and subsequently published in a collection of papers by the Institute), AD A047 244

PP 207
Goldberg, Lawrence, "Cost-Effectiveness of Potential Federal Policies Affecting Research & Development Expenditures in the Auto, Steel and Food Industries," 36 pp., Oct 1977, (Presented at Southern Economic Association Meetings beginning 2 November 1977), AD A046 269

PP 208
Roberts, Stephen S., "The Decline of the Overseas Station Fleets: The United States Asiatic Fleet and the Shanghai Crisis, 1932," 18 pp., Nov 1977 (Reprinted from The American Neptune, Vol. XXXVII, No. 3, July 1977), AD A047 245

PP 209 - Classified.

PP 210
Kassing, David, "Protecting The Fleet," 40 pp., Dec 1977 (Prepared for the American Enterprise Institute Conference on Problems of Sea Power as We Approach the 21st Century, October 6-7, 1977), AD A040 108

PP 211
Mirzai, Maurice M., "On Approximating the Circular Coverage Function," 14 pp., Feb 1978, AD A084 429

PP 212
Mangat, Moh, "On Singular Characteristic Initial Value Problems with Unique Solutions," 30 pp., Jan 1978, AD A088 536

PP 213
Mangat, Moh, "Phenomena in Systems with Multiple Steady States. Application to Landau-Ginzburg Equations," 12 pp., Feb 78, (Presented at the First Annual Workshop on the Information Linkage Between Applied Mathematics and Industry, Naval PG School, Feb 23-25, 1978), AD A071 472

PP 214
Wainland, Robert G., "A Somewhat Different View of The Optimal Naval Posture," 37 pp., Jun 1978 (Presented at the 1978 Convention of the American Political Science Association (APSA)/US Panel on "Changing Strategic Requirements and Military Posture"), Chicago, IL, September 2, 1978, AD A056 228

PP 215
Coile, Russell C., "Comments on: Principles of Information Retrieval by Manfred Kucher," 10 pp., Mar 78, (Published as a Letter to the Editor, Journal of Documentation, Vol. 31, No. 4, pages 290-301, December 1975), AD A054 426

PP 216
Coile, Russell C., "Lotka's Frequency Distribution of Scientific Productivity," 18 pp., Feb 1978, (Published in the Journal of the American Society for Information Science, Vol. 28, No. 6, pp. 368-370, November 1977), AD A054 425

PP 217
Coile, Russell C., "Bibliometric Studies of Scientific Productivity," 17 pp., Mar 78, (Presented at the Annual meeting of the American Society for Information Science held in San Francisco, California, October 1978), AD A054 442

PP 218 - Classified.

PP 219
Hundzinger, R. LaVar, "Market Analysis with Rational Expectations: Theory and Estimation," 60 pp., Apr 78, AD A054 422

PP 220
Mueller, Donald E., "Diagnosization by Group Measures," 26 pp., Apr 78, AD A054 443

PP 221
Wainland, Robert G., "Superpower Naval Diplomacy in the October 1973 Arab-Israeli War," 70 pp., Jun 1978 (Published in Seapower in the Mediterranean: Political Utility and Military Constraints, The Washington Papers No. 61, Beverly Hills and London: Sage Publications, 1979) AD A056 584

PP 222
Marschi, Maurice M., "Correspondence Rules and Path Integrals," 30 pp., Jan 1978 (Invited paper presented at the CNRS meeting on "Mathematical Problems in Feynman's Path Integrals," Marseille, France, May 22-26, 1978) (Published in Springer Verlag Lecture Notes in Physics, 106, (1979), 234-253) AD A056 536

PP 223
Mangat, Marc, "Stochastic Mechanics of Molecule-Ion Molecule Reactions," 21 pp., Jan 1978, AD A056 227

PP 224
Mangat, Marc, "Aggregation, Bifurcation, and Extinction in Exploited Animal Populations," 48 pp., Mar 1978, AD A056 538
"Portions of this work were started at the Institute of Applied Mathematics and Statistics, University of British Columbia, Vancouver, B.C., Canada"

PP 225
Mangat, Marc, "Oscillations, Fluctuations, and the Hopf Bifurcation," 43 pp., Jan 1978, AD A056 537
"Portions of this work were completed at the Institute of Applied Mathematics and Statistics, University of British Columbia, Vancouver, Canada."

PP 226
Raison, J. M. and J. W. Mann, "Temperature and Current Dependence of Degradation in Red-Emitting GaP LEDs," 34 pp., Jun 1978 (Published in Journal of Applied Physics, 50, 3630, May 1979) AD A056 538
"Bell Telephone Laboratories, Inc."

PP 227
Mangat, Marc, "Uniform Treatment of Fluctuations at Critical Points," 50 pp., May 1978, AD A056 539

PP 228
Mangat, Marc, "Relaxation at Critical Points: Deterministic and Stochastic Theory," 54 pp., Jun 1978, AD A056 540

PP 229
Mangat, Marc, "Diffusion Theory of Reaction Rates, I: Formulation and Einstein-Smoluchowski Approximation," 50 pp., Jan 1978, AD A056 541

PP 230
Mangat, Marc, "Diffusion Theory of Reaction Rates, II Ornstein-Uhlenbeck Approximation," 34 pp., Feb 1978, AD A056 542

PP 231
Wilson, Desmond P., Jr., "Naval Projection Forces: The Case for a Responsive NAF," Aug 1978, AD A056 543

PP 232
Jacobson, Louis, "Can Policy Change Be Made Acceptable to Labor?" Aug 1978 (Submitted for publication in Industrial and Labor Relations Review), AD A051 526

PP 233
Jacobson, Louis, "An Alternative Explanation of the Cyclical Pattern of Unions," 23 pp., Sep 1978

PP 234 - Revised
Jandrow, James and Levy, Robert A., "Does Federal Expenditure Displace State and Local Expenditure: The Case of Construction Grants," 25 pp., Oct 1979, AD A051 529

PP 235
Marschi, Maurice M., "The Semidissipative Expansion of the Anharmonic-Oscillator Propagator," 41 pp., Oct 1978 (Published in Journal of Mathematical Physics 20 (1979), pp. 844-851), AD A051 538

PP 237
Mueller, Donald, "A Matrix Criterion for Normal Integral Bases," 10 pp., Jan 1979 (Published in the Illinois Journal of Mathematics, Vol. 22 (1978), pp. 672-681)

PP 238
Ungoff, Kathleen Classen, "Unemployment Insurance and The Employment Rate," 20 pp., Oct 1978 (Presented at the Conference on Economic Indicators and Performance: The Current Dilemma Facing Government and Business Leaders, presented by Indiana University Graduate School of Business), AD A051 527

PP 239
Trotz, R. P. and Werner, J. T., "The Effects of Military Occupational Training on Citizen Savings: An Income Selectivity Approach," 38 pp., Nov 1979, AD A077 531

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Powers, Bruce, "Goals of the Center for Naval Analytics," 13 pp., Dec 1978, AD A053 789

PP 241
Mangat, Marc, "Fluctuations at Chemical Instabilities," 24 pp., Dec 1978 (Published in Journal of Chemical Physics, Vol. 69, No. 8, Oct 15, 1978), AD A053 787

PP 242
Simpson, William R., "The Analysis of Dynamically Interactive Systems (Air Combat by the Numbers)," 180 pp., Dec 1978, AD A053 780

PP 243
Simpson, William R., "A Probabilistic Formulation of Murphy Dynamics as Applied to the Analysis of Operational Research Problems," 18 pp., Dec 1978, AD A053 781

PP 244
Sherman, Allan and Horowitz, Stanley A., "Maintenance Costs of Complex Equipment," 20 pp., Dec 1978 (Published By The American Society of Naval Engineers, Naval Engineers Journal, Vol. 91, No. 6, Dec 1978) AD A071 473

PP 245
Simpson, William R., "The Accelerometer Methods of Obtaining Aircraft Performance from Flight Test Data (Dynamic Performance Testing)," 403 pp., Jun 1979, AD A075 228

PP 246
Brothling, Frank, "Layoffs and Unemployment Insurance," 35 pp., Feb 1979 (Presented at the NBER Conference on "Low Income Labor Markets," Chicago, Jun 1978)

PP 248
Thomas, James A., Jr., "The Transport Properties of Dilute Gases in Applied Fields," 183 pp., Mar 1979

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Glosser, Kenneth S., "A Secretary Problem with a Random Number of Choices," 23 pp., Mar 1979

PP 250
Mangat, Marc, "Modeling Fluctuations in Macroscopic Systems," 26 pp., Jun 1979

PP 251
Trotz, Robert P., "The Estimation and Interpretation of Several Selectivity Models," 37 pp., Jun 1979, AD A075 541

PP 252
Kunn, Walter R., "Precision Finding with Prior Knowledge of Covariance Parameters," 5 pp., Jun 1979 (Published in IEEE Transactions on Aerospace & Electronics Systems, Vol. AES-15, No. 3, March 1979)

PP 253
Glosser, Kenneth S., "The d-Choice Secretary Problem," 22 pp., Jun 1979, AD A075 225

PP 254
Mangat, Marc and Overbeck, David B., "Integration of a Bivariate Normal Over an Offset Circle," 14 pp., Jun 1979

PP 255 - Classified, AD B051 441L

PP 256
Mueller, Donald E., "Using Personnel Distribution Models," 27 pp., Feb 1980, AD A053 218

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PP 258 Mangi, Marc S. and Thomas, James A., Jr., "Analytical Methods in Search Theory," 86 pp., Nov 1979, AD A077 832

PP 259 Glass, David V.; Hsu, In-Cheng; Nunn, Walter R. and Paine, David A., "A Class of Commutative Matrix Measures," 17 pp., Nov 1979, AD A077 833

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PP 261 Vite, Carlos L.; Zvijas, David J. and Ross, John, "French-Cordon Theory of Chemical Dynamics. VI. Angular Distributions of Reaction Products," 14 pp., Nov 1979 (Reprinted from Journal Chem. Phys. 70(12), 15 Jan 1979), AD A076 287

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PP 265 Wainland, Robert G., "War and Peace in the North: Some Political Implications of the Changing Military Situation in Northern Europe," 18 pp., Nov 1979 (Prepared for presentation to the "Conference of the Nordic Balances in Perspective: The Changing Military and Political Situation," Center for Strategic and International Studies, Georgetown University, Jun 15-16, 1978) AD A077 838

PP 266 Ulgenoff, Kathy Classen, and Breitling, Frank, "Taxes and Inflation," 25 pp., Nov 1979, AD A081 194

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PP 268 Thompson, James S., "Export Dependence and Inter-State Cooperation: The Case of Sub-Saharan Africa," 141 pp., Jan 1980, AD A081 193

PP 269 Wain, Kenneth G., "The Soviet Involvement in the Ogaden War," 42 pp., Jan 1980 (Presented at the Southern Conference on Soviet Studies in October, 1979), AD A082 219

PP 270 Romnek, Richard, "Soviet Policy in the Horn of Africa: The Decision to Intervene," 52 pp., Jan 1980 (To be published in "The Soviet Union in the Third World: Success or Failure," ed. by Robert N. Donaldson, Westview Press, Boulder, Co., Summer 1980), AD A081 196

PP 271 McConnell, James, "Soviet and American Strategic Doctrines: One More Time," 43 pp., Jan 1980, AD A081 192

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PP 275 Goldberg, Lawrence, "Delaying an Overhaul and Ship's Equipment," 40 pp., May 1980, AD A085 085

PP 276 Goldberg, Lawrence, "Small Fluctuations in Systems with Multiple Limit Cycles," 19 pp., Mar 1980 (Published in SIAM J. Appl. Math., Vol. 38, No. 1, Feb 1980) AD A086 229

PP 277 Mizrahi, Meirion, "A Targeting Problem: Exact vs. Expected-Value Approaches," 23 pp., Apr 1980, AD A085 086

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PP 282 - Classified.

PP 283 J. Kolben, W. Nunn, and U. Somita, "The Logarithmic Transform," 119 pp., May 1980
• The Graduate School of Management, University of Rochester and the Center for Naval Analyses
• The Graduate School of Management, University of Rochester, AD A086 190

PP 284 Mizrahi, Meirion M., "On the WKB Approximation to the Propagator for Arbitrary Hamiltonians," 25 pp., Aug 1980

PP 285 Cape, Davis, "Limit Cycle Solutions of Reaction-Diffusion Equation," 325 pp., Jun 1980, AD A087 114

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PP 289 Maddala, G. S. * and Trout, R. P., "Some Extensions of the Nerlove-Pres Model," 17 pp., Oct 1980
*University of Florida

PP 290 Thomas, Jr., James A., "The Transport Properties of Binary Gas Mixtures in Applied Magnetic Fields," 10 pp., Sept 1980 (Published in Journal of Chemical Physics 72 (10), 15 May 1980)

PP 291 Thomas, Jr., James A., "Evaluation of Kinetic Theory Collision Integrals Using the Generalized Phase Shift Approach," 12 pp., Sept 1980 (Printed in Journal of Chemical Physics 72 (10), 15 May 1980)

PP 292 Roberts, Stephen S., "French Naval Policy Outside of Europe," 30 pp., Sept 1980 (Presented at the Conference of the Section on Military Studies, International Studies Association Kiewit Island, S.C.)

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PP 294 Roberts, Stephen S., "Maritime Factors Affecting Maritime Security," 14 pp., Oct 1980